AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A communication interface for providing an interface between a data link and a data processor, the data processor being capable of supporting an operating system and a user application, the communication interface being arranged to:

apply to a first queue located in the address space of a user application data received over the link and identified as being directed to a particular logical data port associated with that application;

apply to a second queue located in the address space of the operating system out-of-band data received over the link for the particular logical data port and identified as being directed to the operating system, the second queue being memory mapped into the address space of the user application; and

analyze data received over the link and identified as being directed to the operating system or the data port to determine whether that data meets one or more predefined criteria, and if it does meet the criteria transmit an interrupt to the operating system, the predefined criteria being set such that, when the processing of the application is suspended, the communication interface transmits an interrupt to the operating system on receiving data identified as being directed to that data port.

2-6. (Cancelled)

7. (Previously Presented) A communication interface as claimed in claim 1, wherein one of the predefined criteria is such that if the data received over the link matches one or more predetermined message forms then the communication interface will transmit an interrupt to the operating system.

8. (Previously Presented) A communication interface as claimed in claim 1, wherein the communication interface is arranged to, if the data meets one or more of the predefined criteria and one or more additional criteria, transmit an interrupt to the operating system and transmit a message to the operating system indicating a port to which the data was addressed.

9. (Previously Presented) A communication interface as claimed in claim 8, wherein the additional criteria are indicative of an error condition.

10. (Previously Presented) A communication interface as claimed in claim 1, wherein the communication interface is arranged to apply to a third queue data received over the link and addressed to the logical data port associated with the user application, and is arranged to apply to the first queue data units received over the link and of a form having a fixed length and to apply to the third queue data units received over the link and of a form having a variable length.

11. (Previously Presented) A communication interface as claimed in claim 10, wherein the data units of a fixed size include messages received over the link and interpreted by the communication interface as indicating an error status.

12. (Previously Presented) A communication interface as claimed in claim 10, wherein the data units of a fixed size include messages received over the link and interpreted by the communication interface as indicating a request for or acknowledgement of set-up of a connection.

13. (Previously Presented) A communication interface as claimed in claim 10, wherein the data units of a fixed size include messages received over the link and interpreted by the communication interface as indicating a data delivery event.

14. (Previously Presented) A communication interface as claimed in claim 1, wherein the communication interface is arranged to analyse the content of each data unit received over the

link and to determine in dependence on the content of that data unit which of the said queues to apply the data unit to.

15. (Previously Presented) A communication interface as claimed in claim 1, wherein the communication interface is configurable by the operating system to set the said criteria.

16. (Previously Presented) A communication interface as claimed in claim 1, wherein one or both of the communication interface and the operating system is responsive to a message of a predetermined type to return a message including information indicative of the status of the port.

17. (Previously Presented) A communication system including a communication interface as claimed in claim 16, and the data processor, the data processor being arranged to, when the processing of an application with which a data port is associated is suspended, set the criteria such that the communication interface will transmit an interrupt to the operating system on receiving data identified as being directed to that data port.

18-40. (Cancelled)

41. (New) The communication interface of claim 1, wherein out-of-band data comprises connection setup messages, data delivery events or error events.